TEST ID: HCQ
HYDROXYCHLOROQUINE, SERUM

USEFUL FOR
Monitoring serum hydroxychloroquine concentrations, assessing compliance, and adjusting dosage in patients

CLINICAL INFORMATION
Hydroxychloroquine is an antimalarial drug used to treat or prevent malaria. It is highly effective against erythrocytic forms of Plasmodium, but not effective against exoerythrocytic forms of parasites. Hydroxychloroquine is also used to treat symptoms of acute or chronic rheumatoid arthritis and lupus erythematosus.

Adult doses range from 400 mg/week for suppressive therapy to 1,200 mg/day for acute malaria attacks. Typical daily doses of 200 to 600 mg are used for lupus and rheumatoid diseases. Hydroxychloroquine has a long terminal elimination half-life in blood (>40 days), which exceed those in plasma. The oral bioavailability averages 79%.

Hydroxychloroquine accumulates in several organs, especially melanin-containing retina and skin. Mild to moderate overdose can result in gastrointestinal effects (ie, nausea, vomiting, and abdominal pain), headache, visual and hearing disturbances, and neuromuscular excitability. Acute hepatitis, cardiotoxicity, and retinopathy may occur with therapeutic doses. The effects of overdosage with hydroxychloroquine include headache, drowsiness, visual disturbances, convulsions, cardiovascular collapse, and respiratory arrest. Toxic retinopathy has also been associated with higher doses and longer duration of use.

INTERPRETATION
The serum concentration should be interpreted in the context of the patient’s clinical response and may provide useful information in patients showing poor response, noncompliance, or adverse effects.

REFERENCE VALUES
For suppressive treatment of malaria, suggested plasma or serum concentrations should be >10 ng/mL.

For systemic lupus erythematosus, proposed blood target concentrations should be 1,000 ng/mL.

ANALYTIC TIME
1 day

SPECIMEN REQUIRED
Specimen Type
Serum

Collection Container/Tube
Red top

Submission Container/Tube
Plastic vial

Specimen Volume
1 mL

CONTENT AND VALUES SUBJECT TO CHANGE. SEE THE MAYO MEDICAL LABORATORIES TEST CATALOG FOR CURRENT INFORMATION.
CLINICAL REFERENCE


